

# Installation Guide

Wyse® X Class Conversion to WES7

Wyse® USB Firmware Tool™ Release 1.10

Issue: 102910

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For availability, pricing, and ordering information in the United States and Canada, call 1-800-GET-WYSE (1-800-438-9973) or visit us at <http://www.wyse.com>. In all other countries, contact your sales representative.



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# 1

## Introduction

This guide provides step-by-step instructions to convert X90cw mobile thin clients from WES2009 to WES7.



### Caution

WES7 firmware requires X class mobile thin clients to have a minimum of 4 GB flash and 2 GB RAM.



### Tip

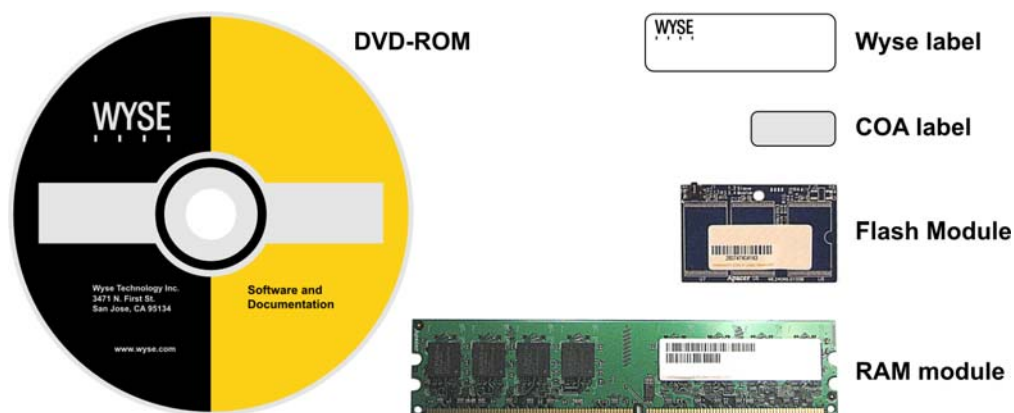
After converting your mobile thin clients, obtain any available firmware update at <http://www.wyse.com/serviceandsupport/support/downloads.asp>.

## Kit Contents

The conversion kit can include:

- *Conversion Software Assembly DVD-ROM*
- *Flash module*
- *RAM module*
- *Wyse Conversion Labels* (you must attach a Wyse label to each converted mobile thin client)
- *Microsoft License Labels* (you must attach a COA label to each converted mobile thin client)

**Figure 1 Kit contents (items may look different or not be included in your kit)**



The *Conversion Software Assembly DVD-ROM* contains:

- *A PDF of this Reference Guide*
- *Wyse USB Firmware Tool Release 1.10*
- *X Class WES7 Conversion Image* folder containing the following files:
  - bios.img
  - cmos.img
  - commandsXml.xml
  - CRC.Txt
  - initrd.pxe
  - mbr.img
  - par1.img
  - vmlinuz

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## Overview

To convert your X class mobile thin clients to WES7:

1. (*Optional*) If you need to perform a hardware installation (install new flash and RAM), complete "Installing X90cw Mobile Thin Client Flash and RAM."
2. (*Required*) Complete "Installing WES7 Firmware."

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## Wyse Technical Support

To access Wyse technical resources, visit <http://www.wyse.com/support>. If you still have questions, you can submit your questions using the [Wyse Self-Service Center](#) (on the Wyse.com home page, go to **Support > Knowledge Base > Home** tab) or call Customer Support at 1-800-800-WYSE (toll free in U.S. and Canada). Hours of operation are from 6:00 A.M. to 5:00 P.M. Pacific Time, Monday through Friday.

To access international support, visit <http://www.wyse.com/global>.

## Related Documentation and Services

Fact Sheets containing the features of hardware models are available on the Wyse Web site. Go to <http://www.wyse.com/products>, click the *Thin Computing Hardware* link, click the link for your hardware model, and then click the link for the Fact Sheet.

Administrator and other documentation for your thin client model are available at: <http://www.wyse.com/manuals>.

## Wyse Online Community

Wyse maintains an online community where users of our products can seek and exchange information on user forums. Visit the Wyse Online Community forums at: <http://community.wyse.com/forum>.

# 2

## Installing X90cw Mobile Thin Client Flash and RAM

This chapter contains information for users of Wyse X90cw mobile thin clients who must install new flash and RAM. If you are installing firmware only, you can skip this chapter and proceed to "Installing WES7 Firmware."

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### Requirements

- Small Phillips screwdriver
- (Optional) Container for holding screws



#### Warning

Flash and RAM modules may be susceptible to damage by Electro-Static Discharge (ESD). All industry-standard cautions should be followed to avoid ESD. Before you remove or install a module, touch any metal part of the chassis and keep that contact with the chassis during the installation process.

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### Procedures



#### Caution

Follow all precautions listed in the Quick-Start Guide that came with your mobile thin client for disconnecting and reconnecting the mobile thin client.

1. Perform a proper shutdown of the mobile thin client by closing all files and ending your session, and then pressing the power button to turn off the mobile thin client.
2. Unplug the power cord and power adapter, and remove any other cables from the mobile thin client.
3. Position the mobile thin client to access the bottom flash and RAM covers.
4. Remove the screws from the flash cover using a small Phillips screwdriver as shown in Figure 2.

**Figure 2 Removing the flash cover screws**

5. Lift the flash cover to remove it and expose the flash module as shown in Figure 3. Notice that the front of mobile the thin client is positioned at the bottom of the photo.

**Warning**

Flash modules may be susceptible to damage by Electro-Static Discharge (ESD). All industry-standard cautions should be followed to avoid ESD. Before you remove or install a module, touch any metal part of the chassis and keep that contact with the chassis during the installation process.

6. Remove the existing flash module. Locate the flash module and push its retaining clip out of the way in the direction of the arrow shown in Figure 3. Lift the flash module out of the socket.

**Figure 3 Removing the existing flash module**

7. Install the new flash module in the reverse order of removing the original flash module. Carefully press down on the flash module until its retaining clip locks it into place.
8. Replace the flash cover in the reverse order as described in steps 5 and 4.



9. Remove the screw from the RAM cover using a small Phillips Screwdriver as shown in Figure 4.

**Figure 4 Removing the RAM cover screw**



10. Lift the RAM cover to remove it and expose the RAM module as shown in Figure 5. Notice that the front of mobile the thin client is positioned at the bottom of the photo.



**Warning**

RAM modules may be susceptible to damage by Electro-Static Discharge (ESD). All industry-standard cautions should be followed to avoid ESD. Before you remove or install a module, touch any metal part of the chassis and keep that contact with the chassis during the installation process.

11. Remove the existing RAM module. Use your fingers to unlock the two retaining clips at either side of the RAM module by pushing in the direction of the arrows shown in Figure 5. The module should pop up from its socket. Lift out the RAM module.

**Figure 5 Removing the existing RAM module**



12. Install the new RAM module in the reverse order of removing the original RAM module. Carefully press down on the RAM module until its retaining clips lock it into place.
13. Replace the RAM cover in the reverse order as described in steps 10 and 9.

**Caution**

Do not turn on the mobile thin client. The mobile thin client is ready to re-image, however the flash module does not contain an operating system. Turning on power to your mobile thin client without firmware will display the error message "NO OPERATING SYSTEM FOUND."

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## What's Next

Continue with "Installing WES7 Firmware."

# 3

## Installing WES7 Firmware

This chapter includes the requirements and procedures you need to install and use Wyse® USB Firmware Tool™ to update your mobile thin client to WES7 firmware.

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### Requirements

- Windows XP Professional SP3 or Windows 2003 Server
- USB key size should be 4 GB or larger (up to 16 GB tested—see "USB Keys - Troubleshooting Boot Issues")

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### Procedures

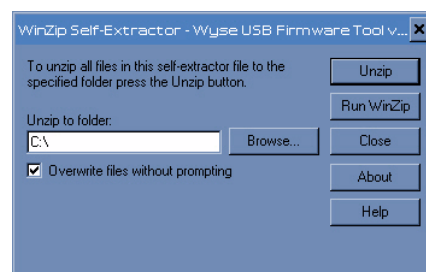
Step 1: Copy the X Class WES7 Conversion Image Folder to Your Local Hard Drive

Navigate to the *X Class WES7 Conversion Image* folder (contained on the *Conversion Software Assembly DVD-ROM*) and copy it to your local hard drive.

Step 2: Install Wyse USB Firmware Tool 1.10

1. Navigate to the *Wyse USB Firmware Tool v1.10\_GA.exe* (contained on the *Conversion Software Assembly DVD-ROM*) and double-click it to execute the file and open the *WinZip Self-Extractor* dialog box.

**Figure 6 Extract files to your hard drive (C:\USBFT110)**



2. Enter **C:\USBFT110** in the **Unzip to folder** box, and then click **Unzip** to extract all files from the *Wyse USB Firmware Tool v1.10\_GA.exe* file into the **C:\USBFT110** directory. The default directory for the extracted files is **Wyse USB Firmware Tool**.



#### Caution

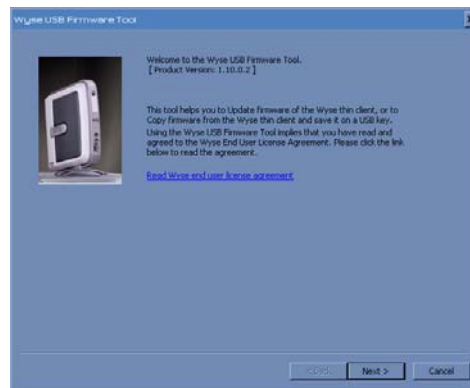
It is not recommended to use your desktop for the destination directory as there are several files that will be extracted from the .exe file.

3. Create a shortcut on the desktop for the *Wyse USB Firmware Tool.exe* file.

### Step 3: Use Wyse USB Firmware Tool to Configure a Single USB Key to Install Firmware

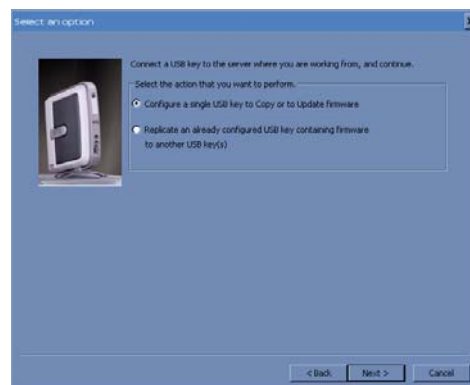
1. Double-click the shortcut to run the tool and open the *Wyse USB Firmware Tool* wizard (the welcome page provides the product version and description, and a link to view the Wyse end user license agreement).

**Figure 7 Wyse USB Firmware Tool wizard**



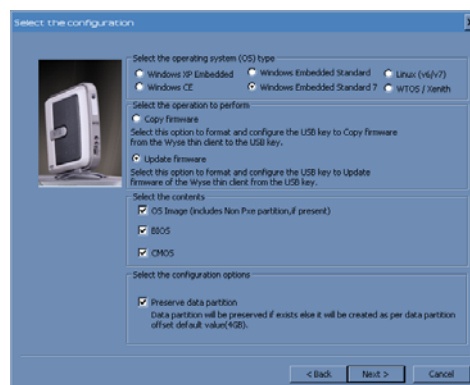
2. Click **Next** to open the **Select an Option** dialog box.

**Figure 8 Configuration options**



3. Select the **Configure a single USB key to Copy or Update firmware** option, and then click **Next** to open the **Select the Configuration** dialog box.

**Figure 9 Update firmware options**

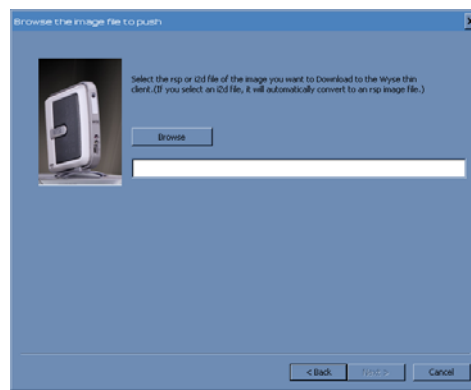


4. Select the **Windows Embedded Standard 7** OS type option.
5. Select the **Update Firmware** operation to perform option.

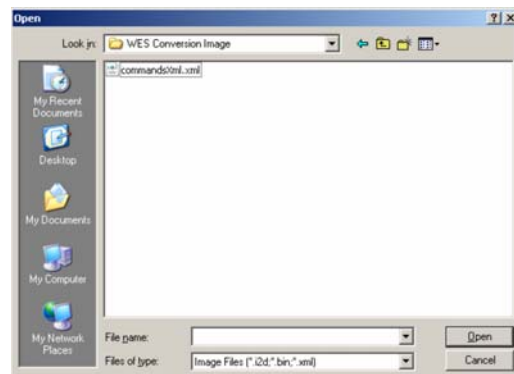
**Tip**

Although the **Preserve data partition** check box is automatically selected to preserve any existing data partition, you can clear the check box if you want to remove the existing data in the data partition.

6. Select all three contents options (**OS Image**, **BIOS**, and **CMOS**).
7. Click **Next** to open the browse dialog box.

**Figure 10 Browse for image file**

8. Click **Browse**.

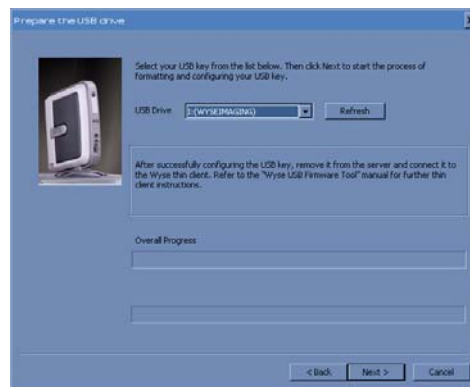
**Figure 11 Browse to select commandsXml.xml**

9. Navigate to the *X Class WES7 Conversion Image* folder on your hard drive (this is the location you selected in "Step 1: Copy the X Class WES7 Conversion Image Folder to Your Local Hard Drive"), click on the **commandsXml.xml** file to select it, and then click **Open**.

**Caution**

Do not use the **commandsXml.xml** file directly from the *Conversion Software Assembly DVD-ROM*.

10. In the browse dialog box, click **Next** to open the **Prepare the USB Drive** dialog box.

**Figure 12 Prepare USB drive**

11. Select the USB key onto which you want the configurations (you can use **Refresh** as needed to recognize an inserted USB key), and then click **Next**. The progress bars show the overall progress and task progress.
12. After configuration, click **Finish** to close the wizard and then remove the configured USB key for use (you will use the configured USB key on your *target* devices).

**Caution**

Before using any configured USB key on a target device (to *push* firmware), you must configure the target device to boot from the configured USB key as described in "Step 4: Use the Configured USB Key to Install Firmware on Each Mobile Thin Client."

#### Step 4: Use the Configured USB Key to Install Firmware on Each Mobile Thin Client

On each mobile thin client you want to convert, you must enter and change the BIOS Setup Utility: Attach the configured USB key to the mobile client (be sure it is shut down). During boot, press and hold the **F2** key. Enter the password **Fireport** (this is case sensitive) and press **Enter**. Select the **Boot** option and press **Enter**. Select the **Legacy** option and press **Enter**. Select the **Normal Boot Menu** option and press **Enter**. Select the option displaying your USB key vendor name and move it to the 1 position by using the + key. Save the BIOS settings and reboot. Follow the process prompts.

**Caution**

There is no one-time boot menu. If needed, you can return your default BIOS configurations after completing your mobile thin client conversions.

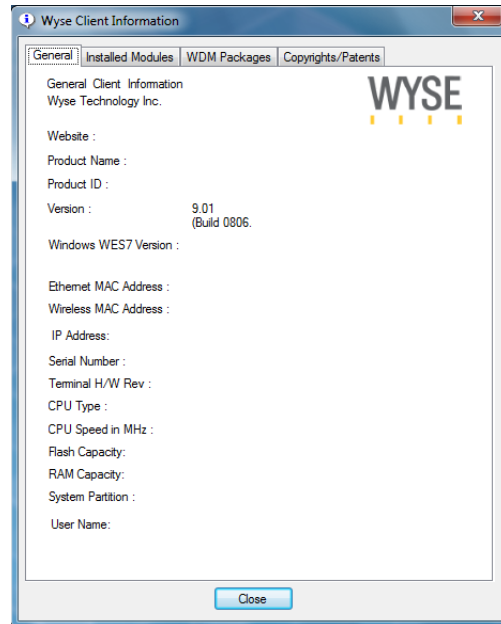
**Tip**

When booting a *target* device from the configured USB key (*containing the contents to be pushed to a target device*), you will be prompted to continue with the *push* process (to continue, type **y** and press **Enter**). Once the *push* process is complete, you will be prompted to reboot (to reboot, press **Enter** and remove the USB key).

### Step 5: Verifying Mobile Thin Client Operation

After the mobile thin client reboots, you can verify the *Version* and that your general client information is correct.

**Figure 13 Client Information (blank example)**



1. On the *General* tab of the *Client Information* window (**Start > All Programs > Wyse Client Information**), verify the following:
  - *Version* is **9.01 Build 0806**.
2. Click **OK** to close the *Client Information* window. The mobile thin client is ready for operation and setup by an administrator.



#### Tip

For security, automatic logon to a *User* desktop is enabled on the mobile thin client by default (and is a member of the *User* group; *not* a member of the *Administrator* group). To log on as a different user or an administrator: Use the *Log off* button (**Start > Log off**) to log off the current desktop while holding down the SHIFT key until the *Log On* window displays. Log on as follows (passwords are case sensitive):

*Administrators* - default *Username* is **administrator** and default *Password* is **Wyse#123**.

*Users* - default *Username* is **user** and default *Password* is **Wyse#123**.

Administrator and other documentation for your mobile thin client model are available at: <http://www.wyse.com/manuals>.

### Step 6: Attach a Wyse Conversion Label and Microsoft License Label on Each Converted Mobile Thin Client

The conversion kit is supplied with *Wyse Conversion Labels* and *Microsoft License Labels* that must be attached to each mobile thin client as shown in Figures 14 and 15. Be sure you have purchased the amount of labels you need.



#### Caution

Failure to install the labels may cause delays in service and support. The serial number must be given to a Customer Support Technician to validate entitlement to support and service from Wyse. Failure to do so will result in the original operating system being loaded on the device and is in breach of your license agreement.

**Figure 14** Placement of Wyse label on the X90cw



**Figure 15** Placement of COA label on the X90cw



### Step 7: Obtain a Firmware Update

After converting your mobile thin clients, obtain any available firmware update at <http://www.wyse.com/serviceandsupport/support/downloads.asp>.



#### Warning

Use of the Software on more than one device requires that you first purchase from Wyse additional copies of, or licenses to, the Software. Contact your local Wyse distributor or Wyse Inside Sales at 1-800-800-9973 option 1 or 1-408-473-1200 option 1.



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## Troubleshooting

This section contains general troubleshooting information.

### USB Keys - Troubleshooting Boot Issues

Due to different manufacturing processes on USB keys (and the variety of them), not all brands have been tested with the Wyse USB Firmware Tool. If you experience problems booting from a configured USB key, it is recommended that you try a different brand of USB key. The following list of USB keys have been successfully tested with the Wyse USB Firmware Tool:

- Kingston Data Traveler 4 GB
- Kingston Data Traveler 8 GB
- SanDisk Cruzer micro 4 GB
- SanDisk Cruzer micro 8 GB
- SanDisk Cruzer micro 16 GB
- Transcendent 4GB

### SanDisk Cruiser Flash Drives - Troubleshooting Partition Issues

**Problem:** How can I properly use a SanDisk Cruiser flash drive to image supported devices using the Wyse USB Firmware Tool? (KB17735)

**Solution:** SanDisk flash drives come with support for U3 (for details on U3, see <http://www.u3.com>). When you initially use these drives, you are prompted to select the use for the drive: *Apps and Storage* or only *Storage*. If you select the *Apps and Storage* option, the drive will create two partitions, one of which is identified as a CD and is a read only partition. This partition sometimes prevents the Wyse USB Firmware Tool to properly prepare the USB key for imaging a device. To resolve this problem you can do one of the following:

- Go to <http://www.sandisk.com>, search in the SanDisk Knowledge Base for document **2550**, and then follow the instructions in the documentation.
- Go to <http://www.sandisk.com/DriverDownload/driverList.asp>, select **USB Flash Drives** from the *Select Product Type* list, click **Find Driver**, select **U3 LaunchPad Remover**, click **Continue**, and then download and use the *U3 Launchpad Remover* according to the instructions.

## **Installation Guide**

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